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ABSTRACT

The two objectives of this study were to determine if the Holland vocational theory had predictive value for teacher performance, and to provide a clearer picture of who would be considered a quality social studies teacher. A Teacher Data Form and a Vocational Preference Inventory (VPI) (Holland, 1977) were completed by 104 social studies teachers in Delaware, Pennsylvania, and Maryland. Each teacher was then evaluated by two immediate supervisors. Variables studied included: age, years in present position and in education, undergraduate grade point average, perceived ratings by students and supervisors, self-rating, activity in professional organizations, job satisfaction and stress, six interest scales of the VPI (Realistic, Investigative, Social, Conventional, Enterprising, and Artistic), and supervisory rating. Two background variables and three VPI interest scale scores were found to be predictive of teacher effectiveness. An outstanding social studies teacher is experienced (has been in present position for several years), is young, has high enterprising and social interests, is understanding and views self as having good teaching ability, has high interpersonal relationship skills, prefers activities which involve the supervision of others, and likes ambiguous, free, and unsystematic activities. (RM)

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# PROFILE OF AN EFFECTIVE SOCIAL STUDIES TEACHER

Summary of a research study involving 104 social studies teachers

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## INTRODUCTION

This study was conducted to determine if the Holland vocational theory (Holland, 1973) had predictive value for teacher performance. It was designed to provide a clearer picture of who would be considered a quality social studies teacher. Are there background and interest/personality variables which contribute to improved performance as a social studies teacher? The study was an extension of Holland's vocational theory and other research testing the predictive validity of the theory for job performance (Wiggins and Weslander, 1979). Instruments associated with the Holland theory are widely used in counseling settings. The Vocational Preference Inventory (Holland, 1977b) and the Self Directed Search (Holland, 1977a) are the two most popular. However, there have been few studies relating the theory with actual job performance. Lackey (1976) and Buros (1978) have provided a review of the literature related to the Holland theory. In general, the structure of the theory and the six environmental dimensions have been supported.

## TEACHERS INCLUDED IN STUDY

Teachers in the state of Delaware who were certified as social studies teachers by the State Department of Public Instruction were sent a Teacher Data Form, a Vocational Preference Inventory (VPI) (Holland, 1977), an agreement to participate form, and a cover letter explaining the study (Appendix A includes a copy of the Teacher Data Form). After the materials were returned, two copies of an evaluation form, Figure 1, were sent to each teacher's two immediate supervisors. In most cases this was a principal and vice principal. The ten item evaluation form asked for ratings on enthusiasm, use of a variety of teaching techniques, clarity of presentation, and several other selected teaching behaviors. With the evaluation form, a cover letter was attached which explained that the teacher(s) had agreed to participate. Two supervisors rated the teacher independently. Complete data were gathered for 57 teachers -- approximately 25 percent of the population sampled. Subsequently, the same data were gathered for an additional 47 social studies teachers from Pennsylvania and Maryland. All of the teachers in the first group and many of those in the second group had been rated by two supervisors. The first group (N=57) served as the study sample and the second group (N=47) was used for cross-validation. Table 1 depicts the descriptive background statistics for the teachers. The two groups were very similar in age, experience, and tested vocational interest patterns.

Relationships among the background and interest/personality characteristics of the teachers were examined as they related to rated job performance. In all, 23 variables were included in the study: age, years in present position, years in education, level of instruction, teacher's educational level, undergraduate grade point average (GPA), perceived

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FIGURE 1

Teacher:_____ Rater's Name:_____

Position:_____

PERFORMANCE FORM

On #1-6 circle the appropriate number.

1. Clarity in presentation of this teacher is:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| Poor | | | | | | | | Excellent |

2. This teacher shows respect for his/her pupils:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| Consistently | | | | | | | | Never |

3. This teacher is business-like and well-organized in teaching:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| Never | | | | | | | | Always |

4. This teacher is enthusiastic:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| Always | | | | | | | | Never |

5. The teacher is a good team worker:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| Always | | | | | | | | Never |

6. This teacher uses variability in materials and classroom activities:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| Never | | | | | | | | Always |

7. Select one of the following statements which best describes how well you think this teacher is performing his/her job:

_____ Terribly
_____ Poorly
_____ In a fair manner
_____ Average manner
_____ Above average manner
_____ Superior manner
_____ In the very best manner

8. Check one of the following to show how much of the time you are satisfied with the teacher's performance on the job:

_____ All of the time
_____ Most of the time
_____ A good deal of the time
_____ About half of the time
_____ Occasionally
_____ Seldom
_____ Never

9. Select one of the following which best describes how you feel about the teacher's job performance:

_____ I would fire this person immediately if I had my way.
_____ I would release this person from his/her job at the end of his/her current contract and not place him/her in any other position in this organization.
_____ I would transfer this teacher to another type of position in this organization.
_____ I would work closely with this teacher in the next year to upgrade his/her skills before deciding what to do.
_____ I am satisfied with the teacher's performance in most areas.
_____ I cannot think of another teacher in the social studies area who could do a better job.
_____ I would not trade this teacher for any other social studies teacher.

10. Check one of the following to show how you think the teacher compares with other teachers in the social studies field:

_____ No one is better
_____ This teacher is much better at his/her job than the average social studies teacher.
_____ This teacher is better at his/her job than the average person in this field.
_____ This teacher is average in job performance.
_____ This teacher needs to improve his/her performance in a number of areas.
_____ This teacher lacks the ability to improve his/her performance and should seek work in another area.
_____ This subject is the worst worker I know in the social studies area.

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TABLE 1

Means and Standard Deviations for Seventeen Variables
Study Sample and Cross-Validation Sample

| Variable | Study Sample, N = 57 | | Cross-Validation Sample, N = 47 | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| Age | 37.00 | 9.76 | 38.74 | 10.67 |
| Years in Present Position | 8.56 | 5.95 | 10.26 | 7.14 |
| Years in Education | 11.53 | 7.35 | 12.70 | 7.36 |
| Grade Point Average (undergraduate) (4.0 = A) | 2.99 | .408 | 2.96 | .450 |
| Perceived Student Rating (1-9) | 6.98 | 1.14 | 7.06 | 1.41 |
| Perceived Supervisory Rating (1-9) | 7.51 | .97 | 7.40 | 1.04 |
| Self-Rating (1-9) | 7.37 | 1.14 | 7.51 | 1.10 |
| Reported Job Satisfaction (1-9) | 5.95 | 1.92 | 6.40 | 1.94 |
| Reported Job Stress (9-1, 1 = very stressful) | 4.63 | 2.12 | 4.70 | 2.36 |
| VPI Scales: | | | | |
| Realistic (0-14) | 3.16 | 3.19 | 3.17 | 3.32 |
| Investigative (0-14) | 4.17 | 4.05 | 3.69 | 3.38 |
| Social (0-14) | 7.42 | 3.45 | 6.81 | 3.86 |
| Conventional (0-14) | 2.44 | 3.09 | 2.79 | 3.75 |
| Enterprising (0-14) | 5.61 | 3.61 | 5.13 | 3.46 |
| Artistic (0-14) | 4.95 | 3.91 | 4.66 | 4.52 |
| Differentiation (0-14) | 8.35 | 2.47 | 8.60 | 3.18 |
| Supervisory Rating (10-82) | 60.38 | 11.38 | 59.40 | 11.24 |

ratings by students and supervisors, self-rating, level of activity in professional organizations, a measure of "teacher-like behavior" before entering teaching (e.g., taking the class for a teacher, reading to younger children, teaching church school), reported job satisfaction, reported job stress, six interest scales of the VPI (Realistic, Investigative, Social, Conventional, Enterprising, and Artistic), the differentiation score of the VPI, and supervisory rating. Perceived ratings job stress and job satisfaction were measured on a nine point Likert scale.

## TEACHER EFFECTIVENESS

Before we present the statistical results of the study, it is important to consider the concept of teacher effectiveness. Volumes have been written about teacher effectiveness. Studies range from short articles to books to dissertations. Earlier research was unclear but some recent elaborate studies connecting certain teacher behaviors with increased student achievement have been particularly illuminating, namely, Fisher and others (1980); Rosenshine and Furst (1973); and Knorr (1982).

One of the major reasons why certain schools are more effective is that they have better teachers. Studies of effective schools show that the qualitative differences in schools can be accounted for by five factors: 1) strong leadership, 2) an orderly school climate, 3) emphasis on basic skills, 4) teacher expectations of high student achievement, and 5) a system of assessing student performance. Teachers are directly involved in three of these factors and are indirectly involved in the others.

There is a common-sense notion of what makes a good teacher. But teacher effectiveness, a little like intelligence, is an often-mentioned but difficult-to-define quality. Everyone believes there is a property of "teacher effectiveness" but it eludes simple definition.

Reviews of the literature on the subject are abundant. The reader can find teacher effectiveness summaries written by Flanders (1960), Dunkin and Biddle (1974), Lass (1980), Rice and Manatt (1977), Ryans (1960), and Weslander (1982). More are being published each year. Clearly the teacher is a well-studied professional. For this study "teacher effectiveness" was operationally defined as supervisory ratings

on selected dimensions which research has shown have a direct relationship with increased student learning. We found that the ratings had high reliability. A split half reliability was computed at r=.96, and a simple correlation between the two ratings for each teacher was r=.73.

There were several limitations to the study. One limitation was that only social studies teachers were included. Also the sample size was not large. Another limitation related to the types of measures taken. Indirect measures of teacher behavior were gathered. Teachers and supervisors completed "paper and pencil" measures; no direct observations were made by the researchers.

## RESULTS AND STATISTICAL ANALYSES

Table 2 shows the intercorrelations of 17 variables included in the study which were treated as continuous data. Eighteen correlations were significant at the .01 level and 14 were significant at the .05 level. Several scales of the VPI were significantly intercorrelated. This was as expected in that the sample of teachers was relatively homogeneous.

Variables having to do with time (age, years in present position and years in education) were most highly correlated with one another. The Social, Enterprising and Conventional scales tended to correspond as did the Investigative and Artistic scales. Relationships among the six Holland interest scales, with but one exception (Social-Enterprising), were in accordance with prior research findings (Holland, 1973, p. 23).

A factor analysis with varimax rotation was used to determine the underlying components within the correlation matrix. Three factors were identified which together accounted for 80.5 percent of the variance. All had eigenvalues greater than one. In order of magnitude, the factors were: (1) time related variables, (2) perceptions of performance, and (3) VPI interest scales.

After preliminary analyses, the variables related to level of instruction, teacher's educational level, activity in professional activities and experience in "teacher-like" behavior were found to not correlate with supervisory ratings. Although these variables may have been salient to other measures of teacher effectiveness (Ryans, 1960; Ryans, 1964) they did not appear to be explanatory for this sample of teachers and were not included in the further analyses.

Linear multiple regression analyses were used to determine the relative contributions of the 16 independent variables, listed in Table 2, with supervisory rating which became the dependent variable.

TABLE 2

Intercorrelations for Variables Included in the Study, N = 57

| VARIABLES | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Age | 1.00 | .64** | .83** | .00 | .32* | .19 | .27* | .14 | .28* | .10 | -.03 | .02 | .04 | -.18 | -.07 | .05 | -.09 | 1. |
| 2. Years in present position | | 1.00 | .80** | -.01 | .22 | .18 | .17 | .00 | .00 | .12 | -.17 | -.13 | -.01 | -.10 | -.10 | .07 | .25 | 2. |
| 3. Years in education | | | 1.00 | -.14 | .27* | .23 | .24 | -.07 | .10 | .11 | -.07 | -.02 | .06 | -.13 | -.01 | .02 | .04 | 3. |
| 4. Grade point average (undergraduate) | | | | 1.00 | -.14 | -.13 | .01 | .09 | -.25 | -.08 | .21 | .07 | -.04 | .14 | .25 | .11 | .24 | 4. |
| 5. Perceived student rating | | | | | 1.00 | .43** | .58** | .32** | .12 | -.12 | -.15 | .16 | .16 | .11 | -.07 | -.05 | -.05 | 5. |
| 6. Perceived supervisory rating | | | | | | 1.00 | .55** | .22 | .23 | .05 | .02 | .30* | .43** | .30* | -.01 | .13 | .19 | 6. |
| 7. Self-rating | | | | | | | 1.00 | .21 | .00 | -.02 | -.06 | .17 | .26* | .13 | -.11 | -.11 | .01 | 7. |
| 8. Reported job satisfaction | | | | | | | | 1.00 | .41** | .24 | .23 | .35** | .38** | .18 | .14 | -.01 | .13 | 8. |
| 9. Reported job stress | | | | | | | | | 1.00 | .21 | -.04 | .17 | .09 | -.06 | -.11 | .13 | -.13 | 9. |
| VPI SCALES: | | | | | | | | | | | | | | | | | | |
| 10. Realistic | | | | | | | | | | 1.00 | .27* | .03 | .34** | .18 | .13 | .30* | .11 | 10. |
| 11. Investigative | | | | | | | | | | | 1.00 | .25 | .23 | .26* | .59** | .14 | .19 | 11. |
| 12. Social | | | | | | | | | | | | 1.00 | .35** | .48** | .22 | .32* | .26* | 12. |
| 13. Conventional | | | | | | | | | | | | | 1.00 | .47** | .23 | .17 | -.07 | 13. |
| 14. Enterprising | | | | | | | | | | | | | | 1.00 | .36** | .34** | .32* | 14. |
| 15. Artistic | | | | | | | | | | | | | | | 1.00 | .21 | .23 | 15. |
| 16. Differentiation | | | | | | | | | | | | | | | | 1.00 | .30* | 16. |
| 17. Supervisory rating | | | | | | | | | | | | | | | | | 1.00 | 17. |

* $p < .05$
** $p < .01$

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Before initiating the regression techniques, a frequency distribution was plotted for each variable to determine if there were departures from normal distributions. The Realistic, Social and Conventional scales of the VPI were somewhat skewed and the three self-ratings tended to cluster near the high end of the one to nine scale. There was variance within all the variables. Next a scatterplot was made comparing the independent variables with the dependent variable; no curvilinear relationships were detected. Many of the correlations were weak and a clear picture was not evident in those cases.

Because the sample could not be considered random (self-selection entered in), seven nonrespondents were contacted by telephone and agreed to answer the questions on the Teacher Data Form. The responses for the nonparticipants closely corresponded to responses by both the study sample and the cross-validation sample.

A series of multiple regression analyses with cross-validation were run using the SPSS regression program. No order of variable entry was specified. The study sample (N=57) was used for the initial analyses and the second sample (N=47) was employed to cross-validate the findings. Because the samples were not large, precautions had to be taken when interpreting the regression findings (Wainer, 1976; Wherry, 1975). The regression coefficients were likely to be unstable with a subsequent shrinkage of the multiple R upon cross-validation.

At the completion of the forward stepwise multiple regression analysis, it was found that five of the independent variables had a multiple correlation of .605 with supervisory rating ($F=5.88$, df 5, 51, $p < .001$). The five variables were age, years in present position and three VPI scales -- Enterprising, Social and Conventional. Age and the

Conventional scale score had negative weights. The combination of the variables explained 36 percent of the variance of supervisory ratings. The first regression formula is shown in Figure 2 with the order of entry and associated coefficients based on raw scores (B weights).

FIGURE 2
Regression Formula, Five Predictor Variables

| Dependent Variable | | Independent Variable | | B Weight |
|---|---|---|---|---|
| Estimated supervisory rating | = | Enterprising score | x | .922 |
| | + | years in present position | x | 1.081 |
| | - | age | x | .458 |
| | + | Social score | x | .982 |
| | - | Conventional score | x | 1.046 |

The total analysis could have ended at this point. Some justification could be shown for using experience, age and three scales of the VPI for predicting performance as a social studies teacher. Relative weights to be attached to the variables could be drawn from the regression equation. However, in order to determine if the findings were reliable and to further explain how the variables were interacting, more analyses were conducted.

In the next stepwise regression, age and years in present position were entered first as covariates to determine the influence of the interest scales after accounting for the time factor. Each of the three VPI scales added significantly to the multiple correlation.

Next, the regression equation using the coefficients drawn from the raw scores of the study sample was applied to the cross-validation sample. Dawes and Corrigan (1974), Wainer (1976), and Wherry (1975) have cautioned against putting much stock in regression coefficients. The weights are

simply too unstable and small sample sizes add to the problem. Wherry was particularly critical of overfitting data using linear multiple regression which results in impressive shrinkage of the multiple correlation upon cross-validation. The warnings were duly noted. Results of the first cross-validation technique were as predicted. The correlation of predicted with actual supervisory rating was a modest .342.

If prediction is the purpose of the multiple regression analysis, Wainer (1976) advocated the use of standard or equal weights in lieu of least squares weights. Several regression analyses were employed to ascertain the value of his recommendation. First, two predictive equations were selected on the basis of the analysis to this point: a short formula and a long formula. The short formula consisted of the five predictor variables which had already been selected. The long formula was derived by selecting other variables which had moderate zero order correlations with the criterion. Grade point average (GPA), the Artistic scale (A) of the VPI, and the Differentiation scale of the VPI were consequently added to the five variables to create the longer predictive equation. The authors concluded that the three additional items contributed uniquely beyond the others toward explaining supervisory rating.

Stepwise multiple regression analyses and cross-validation were used to compare the techniques using two formulas. Results of the different techniques using computed least square regression weight, and equal weights (+1 or -1) for the long and short formulas are shown in Table 3 along with the results of the cross-validation.

TABLE 3

Multiple Correlations
Comparison of B Weights and Equal Weights
in Multiple Regression

| | Short Formula 5 Predictors | | Long Formula 8 Predictors | |
|---|---|---|---|---|
| | B Weights | Equal Weights (+1 or -1) | B Weights | Equal Weights (+1 or -1) |
| Multiple R With Rating N = 57 | .605 | .486 | .655 | .557 |
| Multiple R on Cross-Validation N = 47 | .342 | .463 | .389 | .546 |
| Shrinkage | .263 | .023 | .266 | .011 |

The least squares estimate yielded the highest multiple correlation with the criterion for the study sample, but did not hold up well for predicting supervisory ratings when applied to the second sample. Other things being equal, least squares estimates using raw score weights were the least effective for prediction. Equal weights (assigning a +1 or a -1, depending upon zero order correlation to criterion) were more reliable than the B weights. These findings demonstrate the instability of least squares regression coefficients and demonstrate that computing a multiple regression formula does not necessarily explain the variance of the dependent variable, particularly with small sample sizes and a large predictors to cases ratio. Replication, cross-validation, and other techniques must be applied before making a determination that the regression formula is worth using. Least squares estimates maximize the multiple correlation and, therefore, fit some of the "noise," resulting in an overfit. Shrinkage can also be exaggerated due to the presence of outliers, which have an undue influence on the estimates. By using equal

weights, these two errors can be minimized. As one author advocated, "when you are interested solely in prediction, it is a very rare situation that calls for regression weights that are unequal. This is particularly true in the behavioral sciences, in which relative prediction is the most typical kind of problem" (Wainer, 1976, p. 216).

## DISCUSSION

Based upon a series of multiple regression analyses, two background variables (age and experience in present position) and three VPI interest scale scores (Enterprising, Social and Conventional) together were found to explain 36 percent of the variance of supervisory ratings for the social studies teachers. The findings apply only to the groups of teachers included in the study because the teachers were not randomly selected but there may be limited generalizability because of the cross-validation results, the sample of nonparticipants studied and the similarity of these findings to those of earlier research (Wiggins and Weslander, 1979). Three scales of the VPI and two time factors were moderately predictive of rated performance of social studies teachers. After studying the data, the best candidate for an outstanding social studies teacher appears to be a person who is experienced (has been in his or her present position for several years), is young, has high Enterprising and Social interests and low Conventional interests.

Several questions arise from the results. Why did most background variables (educational level, GPA, major in college, activity in professional organizations) fail to correspond to supervisory rating while three VPI scales were of moderate predictive value? Of the time related variables, why did only years in present position correlate (r=.25) with ratings?

### The Time Factor

Teachers may actually improve with more experience in the same setting. They gain increased knowledge of the school climate and the students; they grow increasingly familiar with the subject at hand. They polish their teaching strategies over time. On the other hand, the

leniency effect of supervisory ratings could also increase over time. This could explain why age and total experience as an educator did not correlate with ratings. It probably looks better for the teacher who has been in the building for ten years to be rated a bit higher than the first year teacher. Also, friendships may develop that confound the supervisor-employee relationship producing spuriously high ratings for the more experienced teacher.

Age by itself was not a useful predictor of performance. However, when added to experience and the three VPI scales, it added to the prediction formula in a negative fashion. In a technical sense, addition of age to the regression formula probably removed some of the error variance due to experience, therefore, increasing the multiple correlation. Age was a kind of supressor variable.

## Interest Scales

The Social and Enterprising scale scores on the VPI were both moderately correlated with supervisory rating. However, the two scales were also positively correlated with one another (r=.48); therefore, they cannot be viewed as two separate variables in the discussion. Together they represent an important dimension of teacher effectiveness for social science teachers. But because the research interest of the study dealt with the predictive value of the VPI scales and the Holland theory, both scales were included in the regression equation.

It is a logical premise, in light of the personality attributes of the Social and Enterprising types, that the two interest scale scores could be successfully used to forecast job performance. Holland's typology for a person with high Social and Enterprising preferences depicts the individual as having preferences for activities that entail teaching,

training and informing others. The individual is understanding and views self as having good teaching ability. The person has high interpersonal relationship skills and prefers activities which involve the supervision of others. Having preferences for these behaviors, the teacher would be in a congruent setting. Teaching, particularly in the social sciences, demands these skills. The person could gain intrinsic and extrinsic rewards by demonstrating these skills. At the same time, both VPI interest scales are people-oriented. A person who is very high in both Social and Enterprising interests is likely to be able to relate to people with ease. This person would be gregarious, talkative and self-confident. A supervisor might even be influenced by "out-of-class" behavior into believing that the person was an excellent teacher based on encounters in the teacher's lounge or hallway, for example. This is especially plausible when we consider the generally low frequency of classroom observations by principals (Gudridge, 1980). In other words, a person with high Social and Enterprising abilities is competent to make a favorable impression on a supervisor.

The negative effect of the Conventional scale score seems less complex. A person high in Conventional interests would have a drive toward order. The Conventional person dislikes ambiguous, free and unsystematic activities. A teacher of social studies encounters uncertainty and ambiguity regularly. Indeed, a premium is placed on uncertainty in some subject areas within the social studies (problems of democracy, human relations, and philosophy). A Conventional type person working as a social studies teacher would be in an incongruent environment, with little chance for reinforcement of needs, interests and values, according to the Holland theory (Holland, 1973).

The results of the analyses must be interpreted with caution because of their correlational nature. A temptation exists to draw causal inferences from correlations. An inspection of the correlation between teacher ratings and VPI scale scores would not exclude a study of the personal and social relationship which exist within a school. Such factors might directly affect the supervisor's assessment of the teacher. Correlations by themselves cannot be used as a basis for cause and effect. Performance ratings and scores on the interest scales have quite different causes. Ratings are closely related to relationships between the teacher and the supervisor and how well the teacher appears to be doing in the class. Criteria differ from school to school. Scores on the VPI Scales are caused by a multitude of factors -- mostly the background of positive and negative experiences one has had. Nevertheless, there is a relationship that exists between the interest scales and supervisory rating. It is possible that the relationship comes through an intervening variable. Briefly, exhibition of Social and Enterprising behaviors and suppression of Conventional type behaviors (in the Holland theoretical model) leads to higher rated performance. This formulation would argue that high Social and Enterprising scale scores along with a low Conventional scale score, rather than causing high performance ratings, would lead to another variable (possibly intrinsic and extrinsic rewards), which would lead to high supervisory ratings.

## Implications

Based on the findings and experience gained through the investigation, a number of implications can be drawn. First, the VPI was found to be reliable for the two samples of social studies teachers. The order of interest strengths was the same for the two groups. For both samples the

rank order of interest scale scores from highest to lowest was Social, Enterprising, Artistic, Investigative, Realistic, Conventional. Based on the Holland theory, this paints a picture of the typical social studies teacher.

The use of the VPI as a screening tool is not recommended. More validation studies are required. However, based upon the results of this study, the following speculation might be made about applications. Three of the VPI scales could be used along with other indicators to aid in selecting prospective social studies educators -- in cases where other criteria were not available. Individuals who scored high on Social and Enterprising interests and low on the Conventional scale would tend to resemble those teachers who were rated high in this study. Equal weights should be assigned to each of the scales. The VPI could be used in counseling college students before they entered upper level teaching preparation. These students could then be followed after leaving college and administered the VPI again. The results could provide valuable data as to whether expressed interests are predictive of job success and tenure. This would be especially helpful in light of the report by Gurney (1977) where professional educators, college students and students majoring in education ranked 14 criteria for effective teachers. Years of teaching experience, participation in the community and professional activities were consistently ranked lowest by the three groups. Personal qualities were ranked high. The VPI provides a reliable and valid method of measuring personal/vocational qualities.

Teacher effectiveness is a multi-dimensional concept. Criteria such as courses completed and grades earned, while convenient and easily quantifiable, have not been shown to relate to increased performance as

a teacher. The personal traits such as those measured by the Social and Enterprising scales of the VPI seem to be more important than other measures in determining supervisors' feelings about social studies teachers.

Local education agencies could use the results of the VPI among their staff to differentiate teaching assignments. Those teachers who score high in the Social and Enterprising categories would tend toward teaching styles characterized as student-centered. These persons would tend to relate well with people, be friendly, energetic, self-confident and talkative (Holland, 1973). These individuals would teach best when they were able to use these preferred skills. Social studies teachers who were of the Conventional type, on the other hand, would be in a somewhat incongruent setting. The teacher could still perform well, but would probably prefer a self-contained classroom where order would prevail. The individual might use programmed instruction and place an emphasis on order and neatness in the classroom and on assignments. The class might be teacher-centered with little open discussion and few questions left unanswered. It would still be possible for such a teacher to be regarded as a successful social studies teacher in terms of measured pupil achievement or supervisory rating. Relating to other social studies teachers, however, might not be easy according to the theoretical framework of the Holland theory. The predominant interest pattern of social studies teachers is Social, Enterprising and Artistic (see Table 1), while the Conventional type person is quite the opposite. There would probably be few shared interests, values and preferred methods of behavior. There are two important dimensions of any job -- performing the duties and relating to co-workers.

The VPI (or a similar measure of interest) could be used to match students and teachers. This process usually occurs in graduate school and, to a lesser degree, in undergraduate school. However, students and teachers are not matched on personality and interest in secondary social studies and most other nonelective courses. Preferred teaching styles could be paired with student learning styles. A compatibility formula could be applied to determine the goodness of fit (based upon the three highest VPI scale scores) between teacher and students. Teachers and students are flexible and each exhibit some of the behaviors characteristic of the different Holland types, but each individual has certain preferred modes of behaviors. This would be a way of capitalizing on those preferences to promote student learning. What is not clear is whether such a matching would lead to increased learning on the part of students.

An incidental finding of this study was that there was no relationship between self-rating and actual supervisory rating ($r=.01$). Discrepancies between supervisory ratings and teacher self-ratings point out the need for the sharing of expectations between administrators and teachers. Teachers need to be knowledgeable about what is expected of them and they need to be involved in defining the criteria for guiding their evaluation. More frequent classroom observations may be helpful. Teachers and administrators need to acknowledge that there is no one correct way to teach, but that teaching approaches vary due to course content, students, materials and the individual teacher. Teachers and principals have varying perceptions of what constitutes teacher effectiveness. More effective communication systems between administrators and teachers must be opened in order to minimize incongruencies relating to teacher evaluation.

This study has helped to define the significance of selected traits for teacher effectiveness in one area, social studies. We do not know if the findings would apply to other subject area instructors. There is a need for researchers to work with teachers, supervisors and professors of education in an attempt to validate generalizations that may be made about the elements which make teachers not just good, but great.

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# APPENDIX A

Teacher Data Form

Name_____

School_____

TEACHER DATA FORM

AGE_____ SEX_____ YEARS IN PRESENT POSITION_____ YEARS AS AN EDUCATOR_____

SOCIAL STUDIES SUBJECT(S) YOU TEACH:

_____

_____

Instructional level(s) or grade level(s)_____

_____

FULL-TIME JOBS YOU HELD BEFORE PRESENT JOB (list most recent first):

1._____ 2._____ 3. _____

EDUCATIONAL LEVEL:

_____Less than bachelors
_____Bachelors
_____Bachelors plus < 15
_____Bachelors plus > 15
_____Bachelors plus > 30
_____Masters
_____Masters plus
_____Doctorate

College grade point average (estimate if you do not recall exact average):

_____Undergraduate
_____Graduate (4.0 = A, 3.5 = B+, etc.)

Major in College:

_____Undergraduate

_____Graduate

Circle how you think your students would rate you as a social studies teacher:

1 2 3 4 5 6 7 8 9
poor excellent

Circle how you think your supervisors would rate you as a social studies teacher:

1 2 3 4 5 6 7 8 9
poor excellent

How would you rate yourself as a social studies teacher?:

1 2 3 4 5 6 7 8 9
poor excellent

Do you belong to and are you active in professional organizations?

Organization(s)_____

_____

Office or Committee Membership_____

_____

How active are you in the professional organizations?

1 2 3 4 5 6 7 8 9
not active extremely active

To what clubs, organizations, or service organizations did you belong in high school or college?

_____

_____

Did you do volunteer work or service work before entering teaching? If so, what was it? Boy Scouts, Girl Scouts, Sunday School teaching, Camp Counseling, etc.

_____

_____

How satisfied are you with your job?

1 2 3 4 5 6 7 8 9
very dissatisfied very satisfied